



026350-068.ST25

SEQUENCE LISTING

<110> Sano, Hiroshi
Kusano, Tomonobu
Koizumi, Nozomu

<120> Theobromine Synthase Polypeptide of Coffee Plant and the Gene
Encoding Said Polypeptide

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<140> US 09/971,020

<141> 2001-10-05

<150> JP 2000-307,149

<151> 2000-10-06

<160> 8

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<212> PRT

<213> Coffea arabica

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 Glu Val Lys Cys Ile Val Glu Glu Glu Gly Ser Cys Glu Ile Leu Tyr
 275 280 285
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 Asp Tyr Pro Val Arg Ser His Glu Gln Ile Lys Ala Glu Tyr Val Ala
 305 310 315 320
 Ser Leu Ile Arg Ser Val Tyr Glu Pro Ile Leu Ala Ser His Phe Gly
 325 330 335
 Glu Ala Ile Met Pro Asp Leu Phe His Arg Leu Ala Lys His Ala Ala
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 <213> *Coffea arabica*

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 Pro Asn Ile Asn Lys Cys Ile Lys Val Ala Asp Leu Gly Cys Ala Ser
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 Gly Pro Asn Thr Leu Leu Thr Val Trp Asp Thr Val Gln Ser Ile Asp
 65 70 75 80
 Lys Val Lys Gln Glu Met Lys Asn Glu Leu Glu Arg Pro Thr Ile Gln
 85 90 95
 Val Phe Leu Thr Asp Leu Phe Gln Asn Asp Phe Asn Ser Val Phe Met
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 Ile Gly Ser Cys Leu Ile Ala Ala Met Pro Gly Ser Phe His Gly Arg
 130 135 140
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 Gln Phe Leu Ser Gln Val Pro Ser Gly Leu Val Thr Glu Leu Gly Ile
 165 170 175
 Thr Ala Asn Lys Arg Ser Ile Tyr Ser Ser Lys Ala Ser Pro Pro Pro
 180 185 190
 Val Gln Lys Ala Tyr Leu Asp Gln Phe Thr Lys Asp Phe Thr Thr Phe
 195 200 205
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 Thr Cys Ile Cys Lys Gly Asp Glu Cys Asp Gly Pro Asn Thr Met Asp
 225 230 235 240
 Leu Leu Glu Met Ala Ile Asn Asp Leu Val Ala Glu Gly Arg Leu Gly
 245 250 255
 Glu Glu Lys Leu Asp Ser Phe Asn Val Pro Ile Tyr Thr Ala Ser Val
 260 265 270
 Glu Glu Val Lys Cys Met Val Glu Glu Glu Gly Ser Phe Glu Ile Leu
 275 280 285
 Tyr Leu Gln Thr Phe Lys Leu Arg Tyr Asp Ala Gly Phe Ser Ile Asp
 290 295 300
 Asp Asp Cys Gln Val Arg Ser His Ser Pro Val Tyr Ser Asp Glu His
 305 310 315 320
 Ala Arg Ala Ala His Val Ala Ser Leu Ile Arg Ser Val Tyr Glu Pro
 325 330 335
 Ile Leu Ala Ser His Phe Gly Glu Ala Ile Ile Pro Asp Ile Phe His
 340 345 350
 Arg Phe Ala Thr Asn Ala Ala Lys Val Ile Arg Leu Gly Lys Gly Phe
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<211> 1360

<212> DNA

<213> Coffea arabica

<400> 4

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agttgcagat ttgggatgcg cttccggacc aaacacactt ttaaccgttt gggacactgt 240
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 <213> *Coffea arabica*

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 35 40 45
 Pro Asn Ile Asn Lys Cys Ile Lys Val Ala Asp Leu Gly Cys Ala Ser
 50 55 60
 Gly Pro Asn Thr Leu Leu Thr Val Arg Asp Ile Val Gln Ser Ile Asp
 65 70 75 80
 Asp Val Arg Gln Glu Met Lys Asn Glu Leu Glu Arg Pro Thr Ile Gln
 85 90 95
 Val Phe Leu Thr Asp Leu Phe Gln Asn Asp Phe Asn Ser Val Phe Met
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 Leu Leu Pro Ser Phe Tyr Arg Lys Leu Glu Lys Glu Asn Gly Arg Lys
 115 120 125
 Ile Gly Ser Cys Leu Ile Ala Met Pro Gly Ser Phe His Gly Arg
 130 135 140
 Leu Phe Pro Glu Glu Ser Met His Phe Leu His Ser Ser Tyr Ser Leu
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 Gln Phe Leu Ser Gln Val Pro Ser Gly Leu Val Thr Glu Leu Gly Ile
 165 170 175
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 180 185 190
 Val Gln Lys Ala Tyr Leu Asp Gln Phe Thr Lys Asp Phe Thr Thr Phe
 195 200 205
 Leu Arg Ile Arg Ser Glu Glu Leu Leu Ser Arg Gly Arg Met Leu Leu
 210 215 220

Thr Cys Ile Cys Lys Gly Asp Glu Phe Asp Gly Pro Asn Thr Met Asp
 225 230 235 240
 Leu Leu Glu Met Ala Ile Asn Asp Leu Val Glu Gly His Leu Glu
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 Glu Glu Lys Leu Asp Ser Phe Asn Val Pro Ile Tyr Ala Ala Ser Val
 260 265 270
 Glu Glu Leu Lys Cys Ile Val Glu Glu Glu Gly Ser Phe Glu Ile Leu
 275 280 285
 Tyr Leu Glu Thr Phe Lys Leu Arg Tyr Asp Ala Gly Phe Ser Ile Asp
 290 295 300
 Asp Asp Cys Gln Val Arg Ser His Ser Pro Glu Tyr Ser Asp Glu His
 305 310 315 320
 Ala Arg Ala Ala His Val Ala Ser Leu Leu Arg Ser Val Tyr Glu Pro
 325 330 335
 Ile Leu Ala Asn His Phe Gly Glu Ala Ile Ile Pro Asp Ile Phe His
 340 345 350
 Arg Phe Ala Thr Asn Ala Ala Lys Val Ile Arg Leu Gly Lys Gly Phe
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 Tyr Asn Asn Leu Ile Ile Ser Leu Ala Lys Lys Pro Glu Lys Ser Asp
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 Ile
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<210> 6

<211> 1304

<212> DNA

<213> *Coffea arabica*

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<213> *Coffea arabica*

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 35 40 45
 Pro Asn Ile Asn Lys Cys Ile Lys Val Ala Asp Leu Gly Cys Ala Ser
 50 55 60
 Gly Pro Asn Thr Leu Leu Thr Val Arg Asp Ile Val Gln Ser Ile Asp
 65 70 75 80
 Lys Val Gly Gln Glu Lys Lys Asn Glu Leu Glu Arg Pro Thr Ile Gln
 85 90 95
 Ile Phe Leu Asn Asp Leu Phe Pro Asn Asp Phe Asn Ser Val Phe Lys
 100 105 110
 Leu Leu Pro Ser Phe Tyr Arg Lys Leu Glu Lys Glu Asn Gly Arg Lys
 115 120 125
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 Thr Cys Ile Cys Lys Gly Val Glu Leu Asp Ala Arg Asn Ala Ile Asp
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 Tyr Glu Pro Ile Leu Ala Ser His Phe Gly Glu Ala Ile Ile Pro Asp
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<211> 1316

<212> DNA

<213> Coffea arabica

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